

LISTING OF CLAIMS

1-14. (Cancelled).

15. (Currently Amended) A method for mining data of a database, comprising:

identifying frequent transaction items of the database and determining an occurrence frequency for each item;

building a probe structure based on the identified frequent transaction items, wherein each branch of the probe structure includes a number of identified frequent transaction items selected based on content of the transaction items and the occurrence frequency of the transaction items, the selected identified transaction items for each branch to be executed independently;

grouping the branches of the probe structure based on the content of each branch; ~~and~~
building a frequent pattern tree (FP-tree) from the branches of the probe structure;
assigning, via a master processor, each branch of the FP-tree to one of a plurality of slave processors, each of the plurality of slave processors to execute the transaction items identified by the respective branch, wherein the number of transactions to be executed by each of the plurality of slave processors is substantially equal.

16. (Currently Amended) The method of claim 15, further comprising scanning a first portion of the database when identifying frequent transaction items of the database, and scanning a second portion of the database when building the probe structure, wherein the probe structure includes an associated number of counts with each branch of the probe structure after scanning the second portion of the database.

17. (Original) The method of claim 15, further comprising building the probe structure to include a probe tree and probe table, and using the probe tree and probe table to build the FP-tree for mining the FP-tree to determine frequent data patterns.

18-19. (Cancelled).

20. (Currently Amended) The method of claim 15, further comprising partitioning the database according to content of the identified ~~frequent~~ **transaction** items to obtain the probe structure, wherein the probe structure includes combinations of the identified ~~frequent~~ **transaction** items and the number of occurrences of one or more content-based transactions.

21. (Currently Amended) A computer-readable **non-transitory storage** medium having stored thereon instructions, which when executed in a system operate to manage data of a database by:

identifying ~~frequent~~ **transaction** items of the database **and determining an occurrence frequency for each item;**

building a probe structure based on the identified frequent **transaction** items, wherein each branch of the probe structure includes a number of identified ~~frequent~~ **transaction** items **selected** based on content **of the transaction items and the occurrence frequency of the transaction items, the selected identified transaction items for each branch to be executed independently;**

grouping the branches of the probe structure based on the content of each branch; ~~and~~

building a frequent pattern tree (FP-tree) from the branches of the probe structure;
assigning, via a master processor, each branch of the FP-tree to one of a plurality of
slave processors, each of the plurality of slave processors to execute the transaction items
identified by the respective branch, wherein the number of transactions to be executed by
each of the plurality of slave processors is substantially equal.

22. (Currently Amended) The computer-readable non-transitory storage medium of claim 21, wherein the instructions, which when executed in a system operate to manage data of a database further by building the probe structure to include a probe tree and probe table, and using the probe tree and probe table to build the FP-tree for mining the FP-tree to determine frequent data patterns.

23. (Cancelled).

24. (New) A system comprising:

a master processor;

a plurality of slave processors;

a database; and

software to

identify transaction items of the database and determining an occurrence frequency for each item,

build a probe structure based on the identified frequent transaction items, wherein each branch of the probe structure includes a number of identified transaction items

selected based on content of the transaction items and the occurrence frequency of the transaction items, the selected identified transaction items for each branch to be executed independently,

group the branches of the probe structure based on the content of each branch,
build a frequent pattern tree (FP-tree) from the branches of the probe structure,
and

assign, via a master processor, each branch of the FP-tree to one of a plurality of slave processors, each of the plurality of slave processors to execute the transaction items identified by the respective branch, wherein the number of transactions to be executed by each of the plurality of slave processors is substantially equal.

25. (New) The system of claim 24, the software to further

scan a first portion of the database when identifying transaction items of the database,
and

scan a second portion of the database when building the probe structure, wherein the probe structure includes an associated number of counts with each branch of the probe structure after scanning the second portion of the database.

26. (New) The system of claim 24, the software to further

build the probe structure to include a probe tree and probe table, and
use the probe tree and probe table to build the FP-tree for mining the FP-tree to determine frequent data patterns.

27. (New) The system of claim 24, the software to further partition the database according to content of the identified transaction items to obtain the probe structure, wherein the probe structure includes combinations of the identified transaction items and the number of occurrences of one or more content-based transactions.